

Magnetic Ignition/Sensor Tester No. 269A

The Magnetic Ignition/Sensor Tester was developed as a fast and simple way of testing magnetic pick-ups or sensors mounted in the distributor or in anti-lock brake systems. It can also be used to bench test engine knock sensors. The two-lead tester adapter plugs directly into the LED Test Unit and uses the LED to detect defective parts. This test can be done with the pick-up mounted on the vehicle, on the bench or at the parts counter.

The Magnetic Ignition/Sensor Tester can be used with any vehicle equipped with magnetic ignition pick-ups: **American:** AMC, Buick, Cadillac, Chevrolet, Chrysler, Dodge, Eagle, Ford, GMC, Geo, Jeep, Lincoln, Mercury, Oldsmobile, Plymouth, Pontiac. **Japanese:** Acura, Daihatsu, Honda, Infiniti, Isuzu, Lexus, Mazda, Mitsubishi, Nissan, Subaru, Suzuki, Toyota. **European:** Alfa Romeo, Audi, BMW, Bentley, Ferrari, Jaguar, Lotus, Maserati, Mercedes Benz, Peugeot, Porsche, Range Rover, Renault, Rolls Royce, Saab, Sterling, Volkswagen, Volvo. **Korean:** Hyundai.

Magnetic Ignition Pick-ups--on-the-vehicle testing:

1. Turn the ignition key to the OFF position.
2. Unplug the vehicle's wire loom connected to the ignition pick-up being tested.
3. Connect either the alligator clips or the probes into the female ends of the tester adapter leads.
4. Connect the tester adapter leads to the ignition pick-up leads (wire colors don't matter, connect any color tester lead to any color ignition pick-up lead).
5. Plug the LED test unit into the two-lead tester adapter.
6. Connect a 9-volt battery to the LED test unit.
7. Make sure the wire leads are not in the way of the fan, belts, hot engine and exhaust pipes.
8. Crank the engine or have someone crank the engine with the ignition key while you watch the LED. If the LED flashes on and off (while cranking), the ignition pick-up is good. If the LED does not flash, the ignition pick-up is defective and needs to be replaced.

Magnetic Ignition Pick-ups--bench testing (also used for ABS/TCS Sensors--bench testing):

1. Place the ignition pick-ups or ABS/TCS sensor on the bench.
2. Connect either the alligator clips or the probes onto the female ends of the tester adapter leads.
3. Connect the tester adapter leads to the "pick-up" or "sensor" terminals (wire colors don't matter, connect any color tester lead to any "pick-up" or "sensor" terminal).
4. Plug the LED test unit into the two-lead tester adapter.
5. Connect a 9-volt battery to the LED test unit.
6. Obtain a small ferrous metal strip or object (it could be a steel knife blade, a feeler gauge, etc.) and move it close to or touching the exposed end of the ignition pick-up or ABS/TCS sensor magnet.
7. Move the ferrous metal strip back and forth across the end of the magnet and the LED will blink on and off. If the LED does not blink, the "pick-up" or "sensor" is defective and needs to be replaced.

ABS/TCS Sensors--on-the-vehicle testing:

1. Turn the ignition key to the OFF position.
2. Jack up the vehicle and locate the wheel to be tested.
3. Find the connection where the ABS/TCS sensor plugs into the vehicle's wiring harness and unplug it.
4. With the alligator clips screwed into the tester adapter leads, connect the tester adapter leads to the ABS/TCS sensor terminals (wire colors don't matter, clip any color tester adapter lead to any terminal).
5. Plug the LED test unit into the two-lead tester adapter.
6. Connect a 9-volt battery to the LED test unit.
7. Turn the wheel with your hand and at the same time observe the LED test unit. It should be flashing on and off as the wheel is rotated. This indicates that the ABS/TCS sensor is good. If the LED test unit does not flash, the ABS/TCS sensor is defective and needs to be replaced.

Knock Sensors--bench testing:

1. Remove the knock sensor from the engine.
2. With the alligator clips screwed into the tester adapter leads, connect the tester adapter leads to the knock sensor, one test lead to the knock sensor's terminal end and the other test lead to the knock sensor's main screw threads (tester adapter lead colors don't matter).
3. Plug the LED test unit into the two-lead tester adapter.
4. Connect a 9-volt battery to the LED test unit.
5. With a metal object, tap the large threaded end of the knock sensor. The LED test unit should flash every time you tap the sensor. If the LED test unit does not flash, the knock sensor is defective and needs to be replaced.

Note: Using a 9-volt battery produces a weak flash. The 12-volt battery adapter - Kastar #264A, or the 120-volt AC adapter - Kastar #296; provides a strong flash for this test.

Test Hints:

1. In direct sunlight or bright light it may be difficult to tell if the LED test unit is lit.
2. Always remember that these types of sensors only produce voltage when you move a metal object back and forth in front of the sensor's magnet within its magnetic field. In fact, the faster you do this, the brighter the LED will be. The metal object must be moved very close to or touching the magnet.

Caution:

1. Keep wires of test unit away from fan, belts, hot engine, and exhaust pipes.
2. Do NOT use a 12-volt battery charger to power the test unit (this may overpower and burn out the test unit).
3. If the 9-volt battery voltage falls below 8.5 volts, replace the battery. (Low voltage can cause incorrect tester readings).